Technical Sheet

THD

High capacity undercut anchor, concrete screw

Undecut anchor for heavy duty



Features

Materiál

- Electro-galvanized steel

Vorteile

- Quicker installation than expansion anchor
- aesthetic hexagonal head
- Large
- Thread design undercuts to efficiently transfer the load to the base material
- Standard fractional sizes
- Specialized heat-treating process creates tip hardness for better cutting without compromising the ductility
- No special drill bit required — designed to install using standard-sized ANSI tolerance drill bits
- Testing shows the Titen HD® installs in concrete with 50% less torque than competitor anchors
- Hex-washer head requires no separate washer and provides a clean installed appearance
- Removable — ideal for temporary anchoring (e.g., formwork, bracing) or applications where fixtures may need to be moved (reuse of the anchor to achieve listed load values is not recommended)

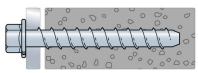
Applications

Anwendbare Materialien

- Cracked and uncracked concrete

Anwendungsbereich

- **Heavy fastening:** Hangers, railling..
- **Numerous conncetions:** cable tray, stadium chairs, racks..;
- **Temporary use**



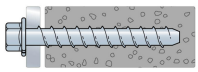












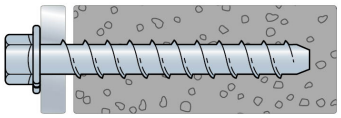
Technical Sheet

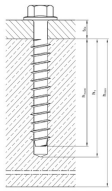
THD

High capacity undercut anchor, concrete screw

SIMPSON Strong-Tie

Technical Data





Rozměry a typické hodnoty

Reference	Metallic fixings rozměry								montážní údaje
	Item code	rozměry výrobku[mm]		ostatní					montážní údaje
		závit Size[mm]	délka[mm]	otvor průměr in fixture [df][mm]	Fixture tloušťka [t_{fix}] (1)[mm]	otvor průměr [d_o][mm]	množství v krabici[pcs]	hmotnost[kg]	Min. drill hloubka - h_1
THD M8-70/5	THD08070	10.3	70	12	5	8	50.0	-	75
THD M8-80/15	THD08080	10.3	80	12	15	8	50.0	-	75
THD M8-100/35	THD08100	10.3	100	12	35	8	50.0	-	75
THD M8-120/55	THD08120	10.3	120	12	55	8	50.0	-	75
THD M8-140/75	THD08140	10.3	140	12	75	8	50.0	-	75
THD M8-160/95	THD08160	10.3	160	12	95	8	50.0	0.073	75
THD M10-80/5	THD10080	12.5	80	14	5	10	50.0	-	85
THD M10-90/15	THD10090	12.5	90	14	15	10	50.0	-	85
THD M10-100/25	THD10100	12.5	100	14	25	10	50.0	-	85
THD M10-120/45	THD10120	12.5	120	14	45	10	50.0	-	85
THD M10-140/65	THD10140	12.5	140	14	65	10	50.0	-	85
THD M10-160/85	THD10160	12.5	160	14	85	10	50.0	-	85
THD M10-170/95	THD10170	12.5	170	14	95	10	50.0	0.12	85
THD M12-110/15	THD12110	14.4	110	16	15	12	20.0	-	105
THD M12-130/35	THD12130	14.4	130	16	35	12	20.0	-	105
THD M16-130/15	THD16130	19.6	130	22	15	16	10.0	-	130
THD M16-150/35	THD16150	19.6	150	22	35	16	10.0	-	130

Technical Sheet

THD
High capacity undercut anchor, concrete screw

SIMPSON Strong-Tie

přípustná zatížení

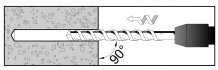
Reference	Metallic fixings loads	
	Recommended únosnost[kN]	
	Nzu,[kN]	Vzu,[kN]
THD M8-70/5	2.4	8.3
THD M8-80/15	2.4	8.3
THD M8-100/35	2.4	8.3
THD M8-120/55	2.4	8.3
THD M8-140/75	2.4	8.3
THD M8-160/95	2.4	8.3
THD M10-80/5	3	13.0
THD M10-90/15	3	13.0
THD M10-100/25	3	13.0
THD M10-120/45	3	13.0
THD M10-140/65	3	13.0
THD M10-160/85	3	13.0
THD M10-170/95	3	13.0
THD M12-110/15	4.8	18.0
THD M12-130/35	4.8	18.0
THD M16-130/15	9.9	27.3
THD M16-150/35	9.9	27.3

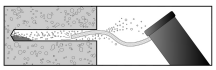
**) Uvedená přípustná zatížení platí pro jednotlivé kotvy v popraskaném betonu bez ohledu na vzdálenost od středu a okraje

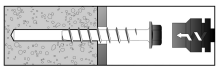
Installation

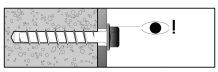
Instalace

- Drill a hole in the base material using a carbide drill bit the same diameter as the nominal diameter of the anchor to be installed. Drill the hole to the specified embedment depth plus minimum hole depth overall (see table below right) to allow the thread tapping dust to settle, and blow it clean using compressed air. (Overhead installations need not be blown clean.) Alternatively, drill the hole deep enough to accommodate embedment depth and the dust from drilling and tapping.
- Insert the anchor through the fixture and into the hole.
- Tighten the anchor into the base material until the hex-washer head contacts the fixture.









Minimum thickness of concrete member, minimum spacing and edge distance

Simpson Strong-Tie Screw anchor THD			Screw size				
			8	10	12	16	20
Cracked concrete	Minimum member thickness	h_{min} [mm]	106	125	150	169	220
	Minimum edge distance	c_{min} [mm]	50	60	80	103	120
	Minimum spacing	s_{min} [mm]	50	60	80	103	120
Non-cracked concrete	Minimum member thickness	h_{min} [mm]	106	125	150	169	220
	Minimum edge distance	c_{min} [mm]	50	60	80	103	120
	Minimum spacing	s_{min} [mm]	50	60	80	103	120

Technical Sheet

THD
High capacity undercut anchor, concrete screw

SIMPSON Strong-Tie

Instalační parametry

Reference	Metallic fixings rozměry			montážní údaje							
	ostatní			montážní údaje			rozteč and okraj distances				
	otvor průměr [d_o] [mm]	otvor průměr in fixture [df] [mm]	Impact šroub driver (7) - T_{sd}[Nm]	Min. drill hloubka - h_1	montáž torque - T_{inst}[Nm]	Embedment hloubka - h_{ef}[mm]	charakteristická rozteč(5) - $Scr_{,n}$[mm]	Min. rozteč - S_{min}[mm]	charakteristická vzdálenost od okraje - $Ccr_{,n}$[mm]	Min. okraj vzdálenost - C_{min}[mm]	Min. podpora tloušťka [h_{min}][mm]
THD M8-70/5	8	12	≤ 200	75	NA	47	141	50	70.5	50	105
THD M8-80/15	8	12	≤ 200	75	NA	47	141	50	70.5	50	105
THD M8-100/35	8	12	≤ 200	75	NA	47	141	50	70.5	50	105
THD M8-120/55	8	12	≤ 200	75	NA	47	141	50	70.5	50	105
THD M8-140/75	8	12	≤ 200	75	NA	47	141	50	70.5	50	105
THD M8-160/95	8	12	≤ 200	75	NA	47	141	50	70.5	50	105
THD M10-80/5	10	14	≤ 515	85	75	55	165	60	82.5	60	125
THD M10-90/15	10	14	≤ 515	85	75	55	165	60	82.5	60	125
THD M10-100/25	10	14	≤ 515	85	75	55	165	60	82.5	60	125
THD M10-120/45	10	14	≤ 515	85	75	55	165	60	82.5	60	125
THD M10-140/65	10	14	≤ 515	85	75	55	165	60	82.5	60	125
THD M10-160/85	10	14	≤ 515	85	75	55	165	60	82.5	60	125
THD M10-170/95	10	14	≤ 515	85	75	55	165	60	82.5	60	125
THD M12-110/15	12	16	≤ 515	105	NA	70	210	80	105	80	150
THD M12-130/35	12	16	≤ 515	105	NA	70	210	80	105	80	150
THD M16-130/15	16	22	≤ 515	130	280	86	258	100	129	100	180
THD M16-150/35	16	22	≤ 515	130	280	86	258	100	129	100	180

Technical Sheet

THD
High capacity undercut anchor, concrete screw

Copyright by Simpson Strong-Tie®

2026-11-15